

## Question #1 of 60

A) Yes, both Sampson and Lawson violated the Standards.

### Explanation

**Standard I(C).** Both Sampson and Lawson have violated Standard I(C) - Professionalism - Misrepresentation. When Sampson prepared biographies with Shadow Mountain Wealth Management Team included in them, she was obviously trying to convey the image that TIM personnel are employees of the bank trust department. This does not portray the correct business relationship between Shadow Mountain and TIM. TIM is an outsourcer to Shadow Mountain and a contract investment management provider, not an employee. Sampson is attempting to create a misleading view of the service level and investment expertise that clients could rightly expect. While Lawson was not a party to preparing such misleading business cards and marketing materials, he participated in the misrepresentation by agreeing to go ahead with the client presentation.

### **For Further Reference:**

Study Session 1, LOS 2.a  
SchweserNotes: Book 1 p.5  
CFA Program Curriculum: Vol.1 p.21

## Question #2 of 60

A) only if Sampson fails to include written disclosures as to the true source and nature of the performance record.

### Explanation

**Standards I(C) and III(D).** Including the BAGF performance is a violation of Standard I(C) - Professionalism - Misrepresentation and Standard III(D) - Duties to Clients - Performance Presentation. When Sampson combines the BAGF performance record with the TIM Composite Equity Composite, this gives potential clients a misleading impression of TIM's long-term equity management performance. The use of this performance data might be acceptable if full disclosure were made as to the source and nature of the data.

### **For Further Reference:**

Study Session 1, LOS 2.a  
SchweserNotes: Book 1 p.5  
CFA Program Curriculum: Vol.1 p.21

## Question #3 of 60

C) It is acceptable to use soft dollars to pay for the StockCal software but not the Add-Invest software.

### Explanation

**Standard III(A).** Luna has violated the CFA Institute Standards of Professional Conduct - Standard III(A) Duties to Clients - Loyalty, Prudence, and Care. Client brokerage is the property or asset of the client and not TIM. Client brokerage should be used only for research products or services that are directly related to the investment decision-making process and not the management costs of the firm. In this case, Luna should disclose to TIM's clients that their brokerage may be used to purchase research. In addition, Luna should seek to ensure that Turn Byer is providing the best execution for TIM's clients. StockCal is clearly providing equity research products/services that aid TIM in the investment decision-making process and not the general operation or management costs of the firm. StockCal may therefore be properly paid for

with client brokerage soft dollars, and this is not a violation of the Standards or Code. However, Add-Invest Software provides TIM's clients with portfolio accounting and performance measurement services and is not related to the investment decision-making process. Therefore, Luna is misusing client resources when she uses client brokerage to purchase Add-Invest Software. Add-Invest is clearly a business expense of TIM and should rightly be paid for by the firm and not the clients. The product or service received must provide proper assistance to the investment manager in following through with his investment decision-making responsibilities.

**For Further Reference:**

Study Session 1, LOS 2.a

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

**Question #4 of 60**

**B)** The increased commissions plan would be a violation, while the cash referral fees would not be a violation.

**Explanation**

**Standard III(A).** The increased commission would be a violation, but the cash referral fee would not. Doubling the commission paid to Wurtzel would be a violation of Standard III(A) Duties to Clients - Loyalty, Prudence, and Care. Client brokerage is strictly an asset of the client and must be used for the benefit of clients in research that will assist the investment manager in the investment decision-making process. Client brokerage cannot be used as a reward for bringing clients to TIM and to do so is a misappropriation of client assets. Cash referral fees are acceptable, so long as the referral arrangement is fully disclosed to the clients in advance of opening their accounts. The case mentions that this disclosure will be made. This disclosure allows the client to evaluate any potential conflict(s) of interest in the referral process.

**For Further Reference:**

Study Session 1, LOS 2.a

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

**Question #5 of 60**

**A)** Yes, because TIM must ensure that client brokerage fees are directed to the benefit of the client.

**Explanation**

**Standard III(A).** In making a \$25,000 contribution to the Hoover Study Center of Unions, Luna has violated Standard III(A) Duties to Clients - Loyalty, Prudence, and Care, which states that Members and Candidates must act for the benefit of their clients and place their clients' interest before their employers' or their own interest. In relationship with clients, Members and Candidates must determine applicable fiduciary duty and must comply with such duty to the persons and interests to whom it is owed. The contribution to the Hoover Study Center of Unions, authorized by the trustees of the union, brings into question this acting for the benefit of the client. Despite providing guidance and governance for the union, trustees are not the client of the union fund; rather, the members of the union and their beneficiaries are the clients of the fund. By making a \$25,000 contribution from the client brokerage, Luna and the trustees have used funds that rightly belong to the members of the union and they have done so without direct compensation to the union members. Luna should not have authorized the pension account to make the contribution and having done so violated her duty to loyally guard the assets of her clients as a fiduciary. Luna has an obligation to follow the Code and Standards. Client brokerage is the property of the client, not the trustee or fiduciary representing the client.

**For Further Reference:**

Study Session 1, LOS 2.a

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

**Question #6 of 60**

C) No, because the client brokerage has been spent at the specific direction of the client.

**Explanation**

**Standard III(A).** In this case, Lutz is the client and, therefore, the direct owner of the client brokerage. If Lutz's desire is to give the soft dollar client brokerage asset to the Roswell Academy, she is free to do so because it is her asset. She is sole owner of her own retirement account. Luna, by following the wishes of the client, is complying with her duty of loyalty. Thus, there is no violation of Standard III(A) Duties to Clients - Loyalty, Prudence, and Care, in the case of the \$10,000 contribution to Roswell Academy.

**For Further Reference:**

Study Session 1, LOS 2.a

SchweserNotes: Book 1 p.5

CFA Program Curriculum: Vol.1 p.21

**Question #7 of 60**

B) Logarithmic transformation.

**Explanation**

A logarithmic transformation of the dependent variable is the most appropriate transformation to apply when the variable grows at a constant rate over time:

$$\ln(\text{sales}) = a + b \cdot t + e$$

The slope of this equation equals the nominal constant rate. The effective rate equals  $e^{b^*} - 1$ .

**For Further Reference:**

Study Session 3, LOS 11.b

SchweserNotes: Book 1 p.191

CFA Program Curriculum: Vol.1 p.408

**Question #8 of 60**

C) \$986 million.

**Explanation**

Quarter 1 of 2009 is the 61st quarter (starting with Quarter 1 of 1994):  $\text{sales} = 10 + 16(61) = \$986 \text{ million.}$

**For Further Reference:**

Study Session 3, LOS 11.a

SchweserNotes: Book 1 p.185

CFA Program Curriculum: Vol.1 p.405

**Question #9 of 60**

A) fall from Quarter 4, 2008, change in sales.

### **Explanation**

The mean reverting value equals the intercept divided by 1 minus slope =  $20 / (1 - 0.10) = 20 / 0.90 = \$22.22$  million. The last change was \$50 million as shown in Exhibit 5 (1000 - 950). Therefore, the AR(1) model predicts that the series will fall anytime the current value (the last quarter in 2008) is above the mean reverting value. The change in sales for the last quarter in 2008 was \$50 million, which exceeds the mean reverting value. We could also have computed the forecasted change in sales for Quarter 1, 2009 as  $20 + (0.1) \times 50 = 25$  (which is lower than the previous change of 50).

### **For Further Reference:**

Study Session 3, LOS 11.f

SchweserNotes: Book 1 p.195

CFA Program Curriculum: Vol.1 p.420

### **Question #10 of 60**

C) the 4th lag.

### **Explanation**

Seasonality refers to repeating patterns each year. Using quarterly data, tests of seasonality focus on the 4<sup>th</sup> lag (i.e., "same time last year"). The autocorrelation for the 4<sup>th</sup> lag is statistically significant. This can be observed by comparing the reported *p*-value (0.02), which is less than the level of significance (0.05).

### **For Further Reference:**

Study Session 3, LOS 11.l

SchweserNotes: Book 1 p.203

CFA Program Curriculum: Vol.1 p.442

### **Question #11 of 60**

B) no autoregressive conditional heteroskedasticity (ARCH).

### **Explanation**

Autoregressive conditional heteroskedasticity refers to an autoregressive equation in which the variance of the errors terms is heteroskedastic (i.e., error variance is not constant). The presence of ARCH is tested with the following regression:

$$e_t^2 = \beta_1 + \beta_2 e_{t-1}^2 + v_t$$

which serves as a proxy for:

$$\text{var}(e_t) = \beta_1 + \beta_2 \text{var}(e_{t-1}) + v_t$$

Exhibit 4 indicates that the slope estimate in the ARCH equation is not significant (the *t*-statistic for the slope estimate of the ARCH equation is not significant). Therefore, the squared error does not depend on its lagged value (i.e., if the slope equals zero, then the error variance equals the constant  $\beta_1$ , which indicates no conditional heteroskedasticity in the AR model). ARCH is not present.

### **For Further Reference:**

Study Session 3, LOS 11.m

SchweserNotes: Book 1 p.207

CFA Program Curriculum: Vol.1 p.449

## Question #12 of 60

B) \$22.5 million.

### Explanation

The most recent change in sales reported in Exhibit 5 was \$50 million (i.e., an increase from \$950 million to \$1,000 million). Therefore, the one-step-ahead forecast is  $20 + 0.1(50) = \$25$  million and the two-step-ahead forecast is  $20 + 0.1(25) = \$22.5$  million.

### **For Further Reference:**

Study Session 3, LOS 11.d  
SchweserNotes: Book 1 p.193  
CFA Program Curriculum: Vol.1 p.415

## Question #13 of 60

B) arbitrage.

### Explanation

The snack foods industry, a regulated entity, has found a way to exploit the differences in regulations among the three states and is engaging in regulatory arbitrage. Regulatory competition is a result of actions taken by regulators to attract certain entities. Regulatory capture is the idea that regulatory bodies are influenced or controlled by the regulated industry.

### **For Further Reference:**

Study Session 4, LOS 15.d  
SchweserNotes: Book 1 p.300  
CFA Program Curriculum: Vol.1 p.684

## Question #14 of 60

C) Carbonated beverages.

### Explanation

The carbonated beverages industry is likely to be hurt by the elimination of bigger sizes of drinks. The snack industry can avoid the new manufacturing tax in East by moving manufacture of sweet snacks to the other two states. The demand for corn is expected to remain fairly high so the regulatory changes in East are unlikely to have a major impact on the Tristanyan agricultural industry.

### **For Further Reference:**

Study Session 4, LOS 15.i  
SchweserNotes: Book 1 p.304  
CFA Program Curriculum: Vol.1 p.700

## Question #15 of 60

C) justification for sunset provisions.

### Explanation

The increase in driving miles was not the intended effect of the regulation. Unintended effects are not a component of implementation cost. Regulatory burden refers to the cost of regulation for the entity being regulated. If sunset clause provisions were included in the regulation, West's regulators would be required to revisit the cost-benefit analysis and consider the cost of unintended consequences before renewing the regulation.

**For Further Reference:**

Study Session 4, LOS 15.h

SchweserNotes: Book 1 p.303

CFA Program Curriculum: Vol.1 p.696

**Question #16 of 60**

**B)** Proposal 2.

**Explanation**

In order for developed countries to grow, technological development is critical. Proposal 2 most clearly addresses this need. Proposal 1 would be more effective if the focus was on post-secondary education, as developed nations benefit more from innovation and less from applying technology. Proposal 3 is unlikely to have a major impact on labor productivity, as developed nations have high capital-to-labor ratios, and incentives to further increase capital will have relatively little effect on labor productivity.

**For Further Reference:**

Study Session 4, LOS 14.h

SchweserNotes: Book 1 p.285

CFA Program Curriculum: Vol.1 p.625

**Question #17 of 60**

**C)** neoclassical growth theory.

**Explanation**

Neoclassical growth theory concludes that capital accumulation affects the level of output but not the long-run growth rate.

**For Further Reference:**

Study Session 4, LOS 14.i

SchweserNotes: Book 1 p.286

CFA Program Curriculum: Vol.1 p.636

**Question #18 of 60**

**A)** low inflation.

**Explanation**

The objectives of regulators in financial markets include prudential supervision, financial stability, market integrity, and economic growth. Low inflation is likely to be an objective of the central bank.

**For Further Reference:**

Study Session 4, LOS 15.f

SchweserNotes: Book 1 p.283

CFA Program Curriculum: Vol.1 p.691

**Question #19 of 60**

**B)** \$17.2 million.

**Explanation**

Held-to-maturity securities are reported on the balance sheet at amortized cost. At the end of 2009, the Pinto bonds have a carrying value of \$9,260,000 (9,200,000 issue price + 60,000 discount amortization). The amortized discount is equal to the \$60,000 difference between the interest expense of \$460,000 ( $9,200,000 \times 5\%$ ) and the \$400,000 coupon payment ( $10,000,000 \times 4\%$ ).

Trading securities are reported on the balance sheet at fair value. At the end of 2009, the fair value of the Vega bonds was \$7,941,591 (N = 39, I = 2, PMT = 175,000, FV = 7,000,000, Solve for PV).

Thus, at the end of 2009, the investment portfolio is reported at \$17.2 million (9,260,000 Pinto bond + 7,941,591 Vega bond).

**For Further Reference:**

Study Session 5, LOS 16.a

SchweserNotes: Book 2 p.1

CFA Program Curriculum: Vol.2 p.10

**Question #20 of 60**

C) Lower net profit margin.

**Explanation**

A \$941,591 unrealized gain ( $7,941,591 \text{ FV} - 7,000,000 \text{ BV}$ ) was included in Viper's net income because the Vega bonds were classified as trading securities. Had the Vega bonds been classified as available-for-sale, the unrealized gain would have been reported as a component of stockholders' equity. In that case, net profit margin would have been lower (lower numerator).

**For Further Reference:**

Study Session 5, LOS 16.a

SchweserNotes: Book 2 p.1

CFA Program Curriculum: Vol.2 p.10

**Question #21 of 60**

A) The difference between the fair value and the carrying value on the date of reclassification is recognized in Viper's other comprehensive income.

**Explanation**

Reclassifying a held-to-maturity security to available-for-sale involves stating the investment on the balance sheet at fair value and recognizing the difference in the fair value and the carrying value as other comprehensive income.

**For Further Reference:**

Study Session 5, LOS 16.a

SchweserNotes: Book 2 p.1

CFA Program Curriculum: Vol.2 p.10

**Question #22 of 60**

C) \$400 million under the full goodwill method.

**Explanation**

Full goodwill method (in millions)

Fair value of Gremlin	\$1,500 (900 purchase price / 60% ownership interest)
Less: Fair value of Gremlin's	
Identifiable net assets	1,100 (700 CA + 950 NCA – 250 CL – 300 LTD)
Goodwill	<hr/> \$400

Partial goodwill method (in millions)

Purchase price	\$900
Less: Pro-rata share of Gremlin's	
Identifiable net assets at FV	660 (700 CA + 950 NCA – 250 CL – 300 LTD) × 60%
Goodwill	<hr/> \$240

Goodwill is not created under the pooling method.

**For Further Reference:**

Study Session 5, LOS 16.b  
 SchweserNotes: Book 2 p.1  
 CFA Program Curriculum: Vol.2 p.10

**Question #23 of 60**

**B)** 1.10.

**Explanation**

Viper's post-acquisition LTD is \$8,000 million [7,700 million BV of Viper + 300 million fair value (FV) of Gremlin debt]. Viper's post-acquisition equity is equal to \$7,300 million (5,800 million Viper pre-acquisition equity + 900 million FV of shares used to acquire Gremlin + 600 million noncontrolling interest). Under U.S. GAAP, the noncontrolling interest is based on the full goodwill method (1,500 million FV of Gremlin × 40% noncontrolling interest). Thus, the long-term debt-to-equity ratio is 1.10 (8,000 million LTD / 7,300 million equity).

**For Further Reference:**

Study Session 5, LOS 16.b, c  
 SchweserNotes: Book 2 p.1, 24  
 CFA Program Curriculum: Vol.2 p.10, 35

**Question #24 of 60**

**C)** No impairment loss is recognized under U.S. GAAP or IFRS.

**Explanation**

According to U.S. GAAP, the goodwill is not impaired because the \$1,475 million fair value of Gremlin exceeds the \$1,425 million carrying value. Thus, no impairment loss is recognized.

Under IFRS, no impairment loss is recognized because the \$1,430 million recoverable amount exceeds the \$1,425 million carrying value.

**For Further Reference:**

Study Session 5, LOS 16.b

SchweserNotes: Book 2 p.1  
CFA Program Curriculum: Vol.2 p.10

### Question #25 of 60

C) Review of the pension fund's guidelines related to developing the specific work product.

#### Explanation

The institutional guidelines related to developing the specific work product is an input source in the first phase (defining the purpose and context of the analysis). Audited financial statements are an example of an input in the data collection phase. Ratio analysis is an example of the output from the data processing phase.

#### **For Further Reference:**

Study Session 6, LOS 20.a  
SchweserNotes: Book 2 p.126  
CFA Program Curriculum: Vol.2 p.271

### Question #26 of 60

C) no change to total assets.

#### Explanation

If the associate reported the investment in debt securities as held-for-trading instead of designated at fair value, its reported income would be unchanged, because unrealized and realized gains and losses under both methods are reported in the income statement. Additionally, because the investment in associate is reported under equity method by Delicious, it does not report individual assets of the investee.

#### **For Further Reference:**

Study Session 5, LOS 16.b  
SchweserNotes: Book 2 p.1  
CFA Program Curriculum: Vol.2 p.10

### Question #27 of 60

A) Financial leverage increased, but the true nature of the leverage decreased.

#### Explanation

Delicious's financial leverage ratio was 1.8 ( $54,753 \text{ average assets} / 29,983 \text{ average equity}$ ) for 2017 and was 1.7 for 2016 ( $49,354 \text{ average assets} / 28,738 \text{ average equity}$ ). Although leverage was higher, the nature of the true leverage was lower. This is because the increasing customer advances (unearned revenue) will not require an outflow of cash in the future and are, thus, less onerous than Delicious's other liabilities.

#### **For Further Reference:**

Study Session 6, LOS 20.b  
SchweserNotes: Book 2 p.127  
CFA Program Curriculum: Vol.2 p.281

### Question #28 of 60

B) Mexico segment.

#### Explanation

As indicated below, the Mexico segment has the lowest EBIT margin, yet it has the highest proportional capital expenditures to proportional assets ratio. Thus, Delicious may be overallocating resources to the Mexico segment.

### Segment Analysis for 2017

	<i>EBIT Margin</i>	<i>Total CapEx %</i>	<i>Total Assets %</i>	<i>CapEx % / Assets %</i>
Europe	14.3%	35.0%	72.0%	0.5
Mexico	8.1%	65.0%	28.0%	2.3

#### For Further Reference:

Study Session 6, LOS 20.b

SchweserNotes: Book 2 p.127

CFA Program Curriculum: Vol.2 p.281

### Question #29 of 60

B) 17.8.

#### Explanation

A finance lease is reported on the balance sheet as an asset and as a liability. In the income statement, the leased asset is depreciated and interest expense is recognized on the liability. The lease adjustment involves adding the rental payment back to EBIT and then subtracting the implied depreciation expense. Next, the implied interest expense for the lease is added to reported interest.

### Operating Lease Adjustment

<i>in millions</i>	<i>Reported</i>	<i>Adjustments</i>	<i>Pro-Forma</i>
EBIT	€7,990	69 <sup>b</sup> – 50 <sup>c</sup>	€8,009
Interest expense	€420 <sup>a</sup>	30 <sup>d</sup>	€450

<sup>a</sup> EBIT – EBT: 7,990 – 7,570 = 420

<sup>b</sup> Rent expense (payment)

<sup>c</sup> Depreciation expense: 300 / 6 years = 50

<sup>d</sup> Interest expense: 300 × 10% = 30

#### For Further Reference:

Study Session 6, LOS 20.c

SchweserNotes: Book 2 p.142

CFA Program Curriculum: Vol.2 p.289

### Question #30 of 60

B) 14.8.

#### Explanation

Delicious's implied value without its U.S. associate is €90,736 [€97,525 Delicious market cap - €6,789 share of associate's market cap ( $\$32,330 \times 30\% \times €0.70$  current exchange rate)].

Delicious's net income without associate is €6,147 (€6,501 net income - €354 pro-rata share of income from associate).

Implied P/E = 14.8 (€90,736 Delicious implied value without associate / €6,147 Delicious net income without associate).

**For Further Reference:**

Study Session 6, LOS 20.e

SchweserNotes: Book 2 p.136

CFA Program Curriculum: Vol.2 p.298

**Question #31 of 60**

**B) Baker, Inc.**

**Explanation**

The justified price-to-book value (P/B) ratio is calculated as:

$$P/B = (ROE - g) / (r - g)$$

where:

growth rate:  $g = ROE \times (1 - \text{payout})$

Able:  $g = 0.25 \times (1 - 1.00 / 2.50) = 0.15$

Baker:  $g = 0.15 \times (1 - 1.60 / 4.80) = 0.10$

Charles:  $g = 0.08 \times (1 - 2.50 / 4.00) = 0.03$

Justified price-to-book value (P/B):

Able:  $P/B = (0.25 - 0.15) / (0.20 - 0.15) = 2$ , implying price =  $2 \times 10 = \$20$

Baker:  $P/B = (0.15 - 0.10) / (0.12 - 0.10) = 2.5$ , implying price =  $2.5 \times 32 = \$80$

Charles:  $P/B = (0.08 - 0.03) / (0.10 - 0.03) = 0.71$ , implying price =  $0.71 \times 50 = \$35.5$

Able sells for \$60, triple its value; Baker sells for \$70, 12% below its value; and Charles sells for \$35.5, right at its value.

**For Further Reference:**

Study Session 11, LOS 32.h, j

SchweserNotes: Book 3 p.165, 171

CFA Program Curriculum: Vol.4 p.363, 367

**Question #32 of 60**

**B) 1.7.**

**Explanation**

The justified price-to-sales (P/S) ratio is calculated as:

$$P/S = [\text{profit margin} \times \text{payout ratio} \times (1 + g)] / (r - g)$$

Baker:  $P/S = [(4.80 / 52.80) \times (1.60 / 4.80) \times (1 + 0.10)] / (0.12 - 0.10) = 1.67$

**For Further Reference:**

Study Session 11, LOS 32.h

SchweserNotes: Book 3 p.165

CFA Program Curriculum: Vol.4 p.363

**Question #33 of 60**

A) overvalued; the stock trades at more than double its value based on a justified price-to-sales ratio.

**Explanation**

Able Corporation should sell for  $[(2.50 / 115) \times (1.00 / 2.50) \times (1 + 0.15)] / (0.20 - 0.15) = 0.20 \times$  sales, or \$23/share. The current market price of \$60 is 161% overvalued. Baker trades for \$70 versus a value of  $1.67 \times 52.8 = \$88$ , a discount of 20%. Charles trades for \$35.50 versus a value of  $1.43 \times 25.75 = 37$ , a negligible discount of 4%.

**For Further Reference:**

Study Session 11, LOS 32.i

SchweserNotes: Book 3 p.169

CFA Program Curriculum: Vol.4 p.363

**Question #34 of 60**

C) Able Corporation's earnings should grow the fastest due to its high ROE and retention ratio.

**Explanation**

A high ROE does not make a company a good investment, nor does a high book value. However, Able Corporation does have the highest potential growth rate. Because the justified values for Charles Company are near the market price, there does not appear to be any problem with the valuation inputs (e.g., required return). The similarity between the justified P/B value and the market price of Charles indicates that it is fairly priced and not an especially attractive investment.

**For Further Reference:**

Study Session 11, LOS 32.i

SchweserNotes: Book 3 p.169

CFA Program Curriculum: Vol.4 p.363

**Question #35 of 60**

B) Baker, Inc.

**Explanation**

Based on the model presented, the predicted P/E ratios can be calculated as:

$$\text{Able: } 2.74 + 8.21(1.00 / 2.50) + 14.21(0.15) + 2.81(0.25) = 8.85$$

$$\text{Baker: } 2.74 + 8.21(1.60 / 4.80) + 14.21(0.10) + 2.81(0.15) = 7.32$$

$$\text{Charles: } 2.74 + 8.21(2.50 / 4.00) + 14.21(0.03) + 2.81(0.08) = 8.52$$

**For Further Reference:**

Study Session 11, LOS 32.e

SchweserNotes: Book 3 p.162

CFA Program Curriculum: Vol.4 p.354

**Question #36 of 60**

A) Only the comment about multicollinearity is correct.

**Explanation**

Swift has correctly stated that if multicollinearity is present in a model, the interpretation of the individual regression coefficients becomes problematic. The existence of multicollinearity is generally signaled by a high R-squared value and low *t*-statistics on the regression coefficients. The *t*-stat for the coefficients for *r*, *g*, and ROE can be calculated as  $(8.21 / 6.52) = 1.26$ ,  $(14.21 / 9.24) = 1.54$ , and  $(2.81 / 2.10) = 1.34$ , respectively. Note that all of these *t*-stats are well below the approximate critical value of 2, indicating they are statistically insignificant. With the high R-squared of 81% and insignificant *t*-stats, it appears that multicollinearity is indeed present in this model. Swift's comment regarding predictive power is incorrect. Cross-sectional regressions have unknown predictive power outside the specific sample and time period used to generate the regression.

**For Further Reference:**

Study Session 11, LOS 32.i

SchweserNotes: Book 3 p.169

CFA Program Curriculum: Vol.4 p.365

**Question #37 of 60**

A) incorrect, as the quoted price is roughly in line with the forward pricing model.

**Explanation**

To obtain  $F_{(2,5)}$ , first calculate the 2-year discount factor  $P_2$  and the 7-year discount factor  $P_7$ .

$$P_2 = 1/(1+0.0036)^2 = 0.9928$$

$$P_7 = 1/(1+0.0227)^7 = 0.8546$$

$$F_{(2,5)} = 0.8546/0.9928 = 0.8608$$

**For Further Reference:**

Study Session 12, LOS 35.b

SchweserNotes: Book 4 p.3

CFA Program Curriculum: Vol.5 p.7

**Question #38 of 60**

B) incorrect, as the forward price will be unchanged if the one-year spot rate occurring in one year is equal to the current one-year forward rate one year from now [ $f(1,1)$ ].

**Explanation**

Spot rates should evolve in line with the current forward rates.

**For Further Reference:**

Study Session 12, LOS 35.c

SchweserNotes: Book 4 p.5  
CFA Program Curriculum: Vol.5 p.14

### Question #39 of 60

A) Advantage one only.

#### Explanation

Retail banks typically have little exposure to swaps and, consequently, they typically use the government yield curve. The swap curve is more commonly used by wholesale banks.

#### **For Further Reference:**

Study Session 12, LOS 35.e  
SchweserNotes: Book 4 p.10  
CFA Program Curriculum: Vol.5 p.22

### Question #40 of 60

C) incorrect, as the spread uses the fixed-rate paid in the swap, not the floating rate.

#### Explanation

The swap spread is the spread paid by the fixed-rate payer of an interest rate swap over the rate on an on-the-run government security with the same maturity as the swap.

#### **For Further Reference:**

Study Session 12, LOS 35.f  
SchweserNotes: Book 4 p.11  
CFA Program Curriculum: Vol.5 p.24

### Question #41 of 60

C) assertion that the TED spread gives better insight into supply and demand conditions than does the swap spread.

#### Explanation

The swap spread gives more information about supply and demand, whereas the TED spread more accurately reflects the level of risk in the banking system.

#### **For Further Reference:**

Study Session 12, LOS 35.g, h  
SchweserNotes: Book 4 p.13, 15  
CFA Program Curriculum: Vol.5 p.28, 29

### Question #42 of 60

A) segmented markets theory in favor of the Cox-Ingersoll-Ross model, with a mean reverting, short-term interest rate of 8%.

#### Explanation

The segmented markets theory and the preferred habitat theory both state that rates are influenced by lenders and borrowers, but it is the segmented markets theory that proposes that the maturity sectors are independent. The "b" term in the Cox-Ingersoll- Ross model is the mean reverting level for the short-term interest rate.

**For Further Reference:**

Study Session 12, LOS 35.i, j  
SchweserNotes: Book 4 p.16, 17  
CFA Program Curriculum: Vol.5 p.31, 32

**Question #43 of 60**

B) Pay floating interest rate swap with quarterly settlement.

**Explanation**

The CFO is looking to reduce the duration of the fixed-rate bond. A pay floating and receive fixed is most likely to achieve this objective.

**For Further Reference:**

Study Session 14, LOS 42.a  
SchweserNotes: Book 4 p.200  
CFA Program Curriculum: Vol.5 p.388

**Question #44 of 60**

B) borrow USD.

**Explanation**

TorkSpark has borrowed USD and thus should engage in a USD for GBP swap. At initiation, TorkSpark would exchange USD principal for GBP principal. During the life of the swap, Torkspark would pay GBP interest and the swap dealer would pay USD interest. In order to hedge these flows, the dealer could enter into a GBP for USD swap. Alternately, the dealer could lend USD and borrow GBP.

**For Further Reference:**

Study Session 14, LOS 42.a  
SchweserNotes: Book 4 p.200  
CFA Program Curriculum: Vol.5 p.388

**Question #45 of 60**

C) € 5,000,000.

**Explanation**

\$/€ forward rate at expiry =  $1 / 0.84487 = 1.18361$  \$/€

\$/€ forward rate at initiation =  $1 / 0.89239 = 1.12059$  \$/€

\$ loss per € =  $1.12059 - 1.18361 = \$ 0.06302$

Loss on forward contract (given) = \$ 189,083

Total € hedged =  $189,083 / 0.06302 = € 3,000,365$ .

Given 60% hedged, Total € receivable =  $3,000,365 / 0.6 = € 5,000,608$

**For Further Reference:**

Study Session 14, LOS 42.a  
SchweserNotes: Book 4 p.200  
CFA Program Curriculum: Vol.5 p.388

### Question #46 of 60

C) short call option and be referred to as a collar.

#### Explanation

To protect against downside risk, Garton is using a long put. A call option can be sold to offset the cost of the put, forming a collar.

#### **For Further Reference:**

Study Session 14, LOS 42.g

SchweserNotes: Book 4 p.210

CFA Program Curriculum: Vol.5 p.413

### Question #47 of 60

A) a Jun 38 call and a Jun 42 call.

#### Explanation

Required break-even price  $38.20 \times 1.035 = \$39.54$

Jun 38, Jun 42

$$\text{Breakeven} = X_L + C_{L0} - C_{H0} = 38 + 1.19 - 0.08 = 39.11 \text{ (meets criteria)}$$

$$\text{Max profit} = X_H - X_L - C_{L0} + C_{H0} = 42 - 38 - 1.19 + 0.08 = 2.89 \text{ (meets criteria)}$$

Jun 39, Jun 42

$$\text{Breakeven} = X_L + C_{L0} - C_{H0} = 39 + 0.70 - 0.08 = 39.62 \text{ (too high) Max}$$

$$\text{Max profit} = X_H - X_L - C_{L0} + C_{H0} = 42 - 39 - 0.70 + 0.08 = 2.38 \text{ (meets criteria)}$$

Jun 39, Jun 41

$$\text{Breakeven} = X_L + C_{L0} - C_{H0} = 39 + 0.70 - 0.18 = 39.52 \text{ (meets criteria)}$$

$$\text{Max profit} = X_H - X_L - C_{L0} + C_{H0} = 41 - 39 - 0.70 + 0.18 = 1.48 \text{ (too low)}$$

#### **For Further Reference:**

Study Session 14, LOS 42.j

SchweserNotes: Book 4 p.218

CFA Program Curriculum: Vol.5 p.427

### Question #48 of 60

C) the maximum loss would not be equal to the net premium.

#### Explanation

All bull spreads involve buying the low strike price option and writing the higher strike price option. When using puts, this will lead to an initial cash inflow equal to the difference in the two premiums. The difference in premiums would also be the maximum gain—not the maximum loss.

**For Further Reference:**

Study Session 14, LOS 42.h

SchweserNotes: Book 4 p.210

CFA Program Curriculum: Vol.5 p.413

**Question #49 of 60**

A) industrial.

**Explanation**

For industrial properties, the most important factor affecting economic value is retail sales growth, which is expected to be low in West Lundia. The most important factor affecting economic value for apartment REITs are job creation and population growth, which are both expected to be high. For office properties, the most important factor is job creation, which is expected to be high.

**For Further Reference:**

Study Session 15, LOS 44.c

SchweserNotes: Book 5 p.37

CFA Program Curriculum: Vol.6 p.90

**Question #50 of 60**

C) WL\$ 99 million.

**Explanation**

There are two components to this valuation. The first component is the cash flows for the first seven years. The second component is the terminal value.

**PV of CFs in years 1-7:**

PMT = 7.0; I/Y = 10; N = 7. The PV = WL\$34.08 million.

**PV of terminal value:**

An appropriate terminal cap rate can be calculated using the following equation:

cap rate = discount rate - growth rate = 10% - 3.25% = 6.75%.

The terminal value is calculated using the following inputs: WL\$8.5 million divided by the terminal cap rate of 6.75%. The value in Year 7 is WL\$125.93 million, discounting this value to the present:

FV = WL\$125.93 million; N = 7, I/Y = 10 results in a present value of WL\$64.62 million.

WL\$34.08 + WL\$64.62 = WL\$98.7 million.

**For Further Reference:**

Study Session 15, LOS 43.g

SchweserNotes: Book 5 p.9

CFA Program Curriculum: Vol.6 p.29

**Question #51 of 60**

C) selling at a premium.

**Explanation**

NAVPS based on forecasted NOI:

<i>Option #2 (REIT)</i>	<i>(in WL\$ millions)</i>
Recent NOI	140.0
Subtract: Non-cash rents	– 5.0
Add: Full-year adjustment for acquisition	+ 5.0
Pro forma cash NOI	140.0
Projected NOI @ 2.5% growth	143.5
Estimated value of operating real estate @ cap rate of 7.0%	2050.0
Add: Other assets	+ 50.0
Estimated gross value	2100.0
<i>Subtract: Total liabilities</i>	– 300.0
NAV	1800.0

NAVPS = 1800 / 15 = 120, which is lower than the current market price of WL\$125.00. This REIT is selling at a premium to NAVPS.

**For Further Reference:**

Study Session 15, LOS 44.e

SchweserNotes: Book 5 p.43

CFA Program Curriculum: Vol.6 p.98

**Question #52 of 60**

C) avoid structural conflicts of interest.

**Explanation**

Option 1 represents private investment in real estate, while Options 2 and 3 entail investing through public securities. Tax advantages can be enjoyed by direct investments in real estate, as well as through public securities. Similarly, use of leverage can be pursued by all three options. Option 1 does not have the problem of structural conflicts of interest that may be present in REITs (Option 2).

**For Further Reference:**

Study Session 15, LOS 43.c

SchweserNotes: Book 5 p.4

CFA Program Curriculum: Vol.6 p.13

**Question #53 of 60**

A) WL\$ 125.50.

**Explanation**

The terminal value estimate is  $12.0 \times \text{WL\$13.5 MM}$  for end of year 7 or WL\$162.0 MM. The discount rate is the cap rate of 7.0% plus the growth rate of 2.5%, or 9.5%. Discounting this terminal value to find the present value:  $FV = \text{WL\$162.0 MM}; I/Y = 9.5\%; N = 7; PV = \text{WL\$85.83}$

MM. Add the present value of all dividends of WL\$39.7 MM for a total of WL\$125.53 MM. Divide WL\$125.53 MM by 1 million shares outstanding for a value per share of WL\$125.53.

**For Further Reference:**

Study Session 15, LOS 44.h

SchweserNotes: Book 5 p.48

CFA Program Curriculum: Vol.6 p.113

**Question #54 of 60**

C) capital appreciation is more highly valued than current income.

**Explanation**

Investment in both public REOCs and public REITs enjoy high liquidity, as shares of both trade on a stock exchange. Tax advantages favor REITs as REOCs are not tax-advantaged. REOCs are more reliant on capital appreciation due to their ability to reinvest cash flows, while REITs tend to have higher current income (i.e., yield).

**For Further Reference:**

Study Session 15, LOS 44.a

SchweserNotes: Book 5 p.34

CFA Program Curriculum: Vol.6 p.80

**Question #55 of 60**

B) the parametric method.

**Explanation**

VaR has been calculated using the parameters (mean and standard deviation) of the portfolio and assuming a distribution for portfolio risk factors. A historical simulation would instead identify actual returns from the portfolio and identify the 5<sup>th</sup> percentile.

**For Further Reference:**

Study Session 16, LOS 49.b

SchweserNotes: Book 5 p.165

CFA Program Curriculum: Vol.6 p.308

**Question #56 of 60**

C) too low given the assumptions and method described.

**Explanation**

To calculate the daily VaR from an annual VaR, the mean and standard deviation must be adjusted using the 250 trading days described.

The mean has been correctly calculated as  $9.4\% / 250 = 0.0376\%$

The standard deviation, however, should be divided by  $\sqrt{250} : 14.2\% / \sqrt{250} = 0.898\%$

This would result in a 5% daily VaR =  $[(0.0376\% - (1.65 \times 0.898\%))] = -1.44\%$ .

**For Further Reference:**

Study Session 16, LOS 49.c

SchweserNotes: Book 5 p.165

CFA Program Curriculum: Vol.6 p.308

## Question #57 of 60

**B)** a stop loss limit.

### Explanation

Liquidating a position when losses exceed a certain amount is an example of a stop loss limit.

### **For Further Reference:**

Study Session 16, LOS 49.k

SchweserNotes: Book 5 p.175

CFA Program Curriculum: Vol.6 p.345

## Question #58 of 60

**C)** maximum drawdown because it is not a measure of redemptions.

### Explanation

Maximum drawdown is most commonly defined as the worst peak-to-trough decline in a portfolio's returns, or the worst-returning month or quarter for a portfolio. Maximum drawdown is an important risk measure for hedge funds. Redemption risk is a measure for open-end funds of the percentage of a portfolio could be redeemed at peak times.

### **For Further Reference:**

Study Session 16, LOS 49.h

SchweserNotes: Book 5 p.171

CFA Program Curriculum: Vol.6 p.323

## Question #59 of 60

**B)** painting the tape.

### Explanation

The practice of driving the price in one direction with a series of small orders before executing a large order in the other direction is known as painting the tape.

### **For Further Reference:**

Study Session 17, LOS 52.f

SchweserNotes: Book 5 p.218

CFA Program Curriculum: Vol.6 p.517

## Question #60 of 60

**B)** executing simultaneous buy and sell orders on the same financial instrument.

### Explanation

Wash trading is a kind of market manipulation where the investor buys and sells the same financial instrument simultaneously, in order to simulate demand in the instrument by boosting trading volume. Placing a legitimate trade on one side of the market and several bogus orders on the other side of the market is known as layering. Entering large quantities of fictitious orders into the market and instantaneously canceling them is known as quote stuffing.

### **For Further Reference:**

Study Session 17, LOS 52.f

SchweserNotes: Book 5 p.218

CFA Program Curriculum: Vol.6 p.517